INTRODUCTION

Indian Railways

Rail transport is a means of conveyance of passengers and goods on wheeled vehicles running on rails. It is also commonly referred to as train transport. In contrast to road transport, where vehicles run on a prepared flat surface, rail vehicles ("rolling stock") are directionally guided by the tracks on which they run. Track usually consists of steel rails, installed on ties (sleepers) and ballast, on which the rolling stock, usually fitted with metal wheels, moves.

Every country posses their own railways transport. This proposal is about **north western part of Indian Railways**. Before getting deep into NWR it is first important to get some knowledge about Indian Railways.

Indian Railways (**IR**) is an Indian state-owned enterprise, owned and operated by the Government of India through the Ministry of Railways. It is one of the world's largest railway networks.

Railways were first introduced to India in the year 1853 from Mumbai to Thane. It is the backbone of service sector and one of the biggest employers in India. It is one of the gigantic public undertakings enriched with 115,000 km (71,000 mi) of track over a route of 65,808 km (40,891 mi) and 7,112 stations. The trains have a 5 digit numbering system and runs 12,617 passenger trains and 7421 freight trains daily. Its operations cover twenty nine states and seven union territories and also provide limited international services to Nepal, Bangladesh and Pakistan.

Indian Railways is the world's seventh largest commercial or utility employer, by number of employees, with over 1.376 million employees as of last published figures in 2013.

Railway Zones

Indian Railways is divided into 17 zones, which are further sub-divided into divisions. The number of zones in Indian Railways increased from six to eight in 1951, nine in 1966 and sixteen in 2003. Each zonal railway is made up of a certain number of divisions, each having a divisional headquarters. There are a total of sixty-eight divisions.

Each zone is headed by a general manager, who reports directly to the Railway Board. The zones are further divided into divisions, under the control of divisional railway managers (DRM). The divisional officers, of engineering, mechanical, electrical, signal and telecommunication, accounts, personnel, operating, commercial, security and safety branches, report to the respective Divisional Railway Manager and are in charge of operation and maintenance of assets. Further down the hierarchy tree are the station masters, who control individual stations and train movements through the track territory under their stations' administration.

Brief Description of the Indian Railway's Zones

Sr. No	Name	Date Established	Route km	Number of Stations	Headquarters	Divisions
1	Southern Railway	14 April 1951	6844	890	Chennai	Chennai, Tiruchirappalli, Madurai and Salem, Palakkad,Thiruvananthapuram
2	Central Railway	5 November 1951	3905	612	Mumbai	Mumbai CST, Bhusawal, Pune,Solapur and Nagpur
3	Western Railway	5 November 1951	6440	1046	Mumbai	Mumbai Central, Ratlam,Ahmedabad, Rajkot, Bhavnagar andVadodara
4	Eastern Railway	14 April 1952	2680	576	Kolkata	Howrah, Sealdah, Asansol andMalda Town
5	Northern Railway	14 April 1952	7221	1142	Delhi	Delhi, Ambala, Firozpur, Lucknow and Moradabad
6	North Eastern Railway	14 April 1952	3667	537	Gorakhpur	Izzatnagar, Lucknow and Varanasi
7	South Eastern Railway	1955	2711	353	Kolkata	Adra, Chakradharpur, Kharagpur andRanchi
8	Northeast Frontier Railway	15 January 1958	3907	690	Maligaon	Alipurduar, Katihar, Rangia, Lumding and Tinsukia

9	South Central Railway	2 October 1966	5951	883	Secunderabad	Vijayawada, Secunderabad,Guntakal, Guntur, Hyderabad andNanded
10	East Central Railway	1 October 2002	3628	800	Hajipur	Danapur, Dhanbad, Mughalsarai,Samastipur and Sonepur
11	North Western Railway	1 October 2002	5554	663	Jaipur	Jaipur, Ajmer, Bikaner and Jodhpur
12	East Coast Railway	1 April 2003	2677	342	Bhubaneswar	Khurda Road, Sambalpur andVisakhapatnam
13	North Central Railway	1 April 2003	3363	435	Allahabad	Allahabad, Agra and Jhansi
14	South East Central Railway	1 April 2003	2447	358	Bilaspur	Bilaspur, Raipur and Nagpur
15	South Western Railway	1 April 2003	3322	456	Hubballi	Hubballi, Bengaluru, Mysuru andKalburgi
16	West Central Railway	1 April 2003	2995	372	Jabalpur	Jabalpur, Bhopal and Kota
17	Konkan Railway	26 January 1998	736	70		

Source: Wikipedia Indian Railways.

North Western Railway

According to Wikipedia North **Western Railway** is one of the sixteen railway zones in India. It is headquartered at Jaipur. It comprises four divisions: Jodhpur and reorganized Bikaner division of the erstwhile Northern Railway and reorganized Jaipur and Ajmer divisions of the erstwhile Western Railway. This zone came into existence on 1 October 2002. This railway comprises a total of 578 stations covering a total of 5449.29 route km. NWR even holds international rail service Thar express Jodhpur to Munabao.

Brief Outline of the Divisions

Jaipur Division –The total no. of stations on this division is 128 and the total no. of trains run is 146. The staff strength of this division in all categories is 12007.

Bikaner Division –The total no. of stations in this division is 198 .The staff strength of this division in all categories is 13728.

Ajmer Division –This division has 130 stations and the total no. of trains run over the division amounts to 36 in both the passenger and mail/exp category. The staff strength of this division in all categories is 9046.

Jodhpur Division –This division has a total of 144 stations and deals with 92 trains in the inward and outward directions. The staff strength of this division in all categories is 10231.

Human Resources

Service sector in India consists of a wide variety of services such as electricity, water supply, road, rail and air transport etc which provides a vast opportunities for HRD.

The core aim of Human Resource Management is to attain the organization effectiveness. The real assets of Indian Railways are the Human Resource. **Human Resource Management in Indian Railways** is managed by officers of **Indian Railway Personnel Service** (IRPS), a Group 'A' service created on 1.1.1976 through a promulgation issued by the President of India. IRPS officers are recruited through the Civil Services Examination conducted by the Union Public Service Commission.

In-service Group 'B' personnel officers of IR also have a channel of career progression into IRPS. IRPS is the only organized Group 'A' service specializing in the Human Resources functions under the Government of India. IRPS officers manage the entire gamut of HR functions that impact over 1.3 million serving employees and 1.4 million retired employees of Indian Railways.

Occupational Stress

Stress is simply a reaction to a stimulus that disturbs our physical or mental equilibrium. Occupational stress is stress related to one's job. Occupational stress often stems from unexpected responsibilities and pressures that do not align with a person's knowledge, skills, or expectations, inhibiting one's ability to cope.

It is always said that you should always feel calm and focused no matter what life sends in your way. But in reality it is not possible to have stress free life.

An Indian railway employee faces so many stress causing conditions in his course of work life. So this study will going to be all about causes and effects of occupational stress over the job performance of North Western Railway employees.

REVIEW OF LITERATURE

Literature is that term which is used to describe written and sometimes spoken material. It is derived from the Latin word **litteratura** meaning "writing formed with letters," It is most commonly refers to the works of the creative imagination, including poetry, drama, fiction, nonfiction, journalism, and in some instances, song.

Review of literature is a critical and in depth evaluation of previous research in particular area. It is a summary and synopsis of a particular area of research, allowing anybody reading the paper to establish why this particular research program is being perused. A good literature review expands upon the reasons behind selecting a particular research question. It helps in finding the research gaps. Literature reviews use secondary sources, and do not report new or original experimental work. It is an evaluative report of studies found in the literature related to the selected area. The review should describe, summarize, evaluate and clarify this literature. It should give a theoretical basis for the research.

Graphical Representation: Pie-chart showing division of articles on the basis of year of their publication.

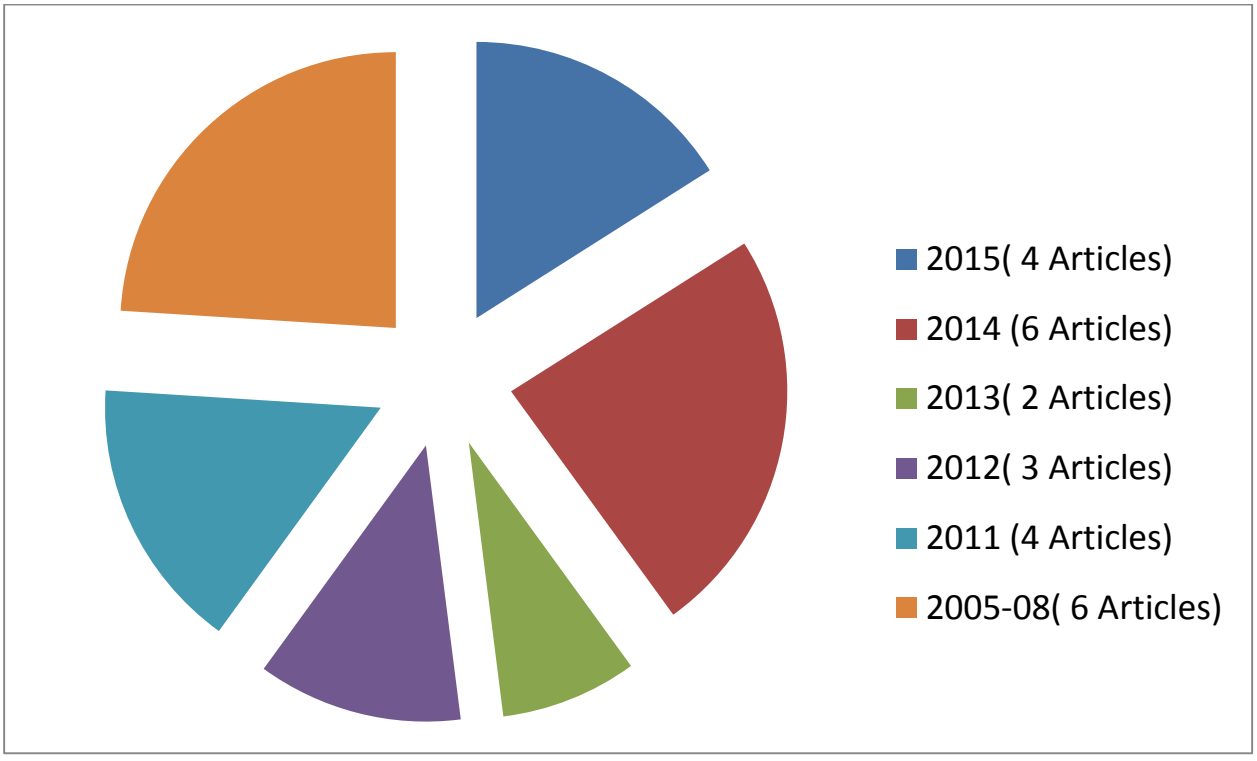

Table Showing Brief Description of Reviewed Articles.

Sr. No.	Year	Writer	Title	Objective of the Study	Methodology Used	Conclusion
1	2015	Nganga Karihe, John, Professor G. S. Namusonge and Dr. Mike Iravo	Effects of Working Facilities Stress Factors on the Performance of Employees in Public Universities in Kenya	Is to assess the effects of occupational stress and how it affects employee performance in the public universities in Kenya.	The study employed a cross-sectional evaluation survey approach. This used both qualitative and quantitative methods in the selection of the participants and collection of data. Cluster sampling was employed to select 384 respondents.	The study found out that the determinants of stress affects the performance of employees.
2	2015	Khan, S.M	A Causal Paradigm of the Antecedents of Organizational Commitment – Case of Loco Pilots of Indian Railways	To study the causal relationship between facets of perceived work environment and need satisfaction in instilling organizational commitment.	A sample of 400 Loco Pilots was drawn from thirty-four divisions of Central, Eastern, and Northern, North–Eastern, Southern, South Eastern and Western zones leaving only two zones unattended of the Indian Railways. This study used path analysis	The results of model fit conclude the satisfaction of social needs, citizenship behavior and recognition at work; influence the organizational commitment of Loco Pilots.

					modeling.	
3	2015	Srinivas, T. and Dr.M.Vidyasagar Reddy	The Human Intervention in Train Safety on Indian Railways	Safety is important as technology advancement increasing daily. It is important for us to understand and investigate the performance of the train driver in order to ensure safety.		Since human error contributes to a major part of accidents, IR should strictly ensure that the modernization and up gradation of training facility to the staff is completed on time.
4	2015	Richter, Anne, Karin Schraml and Constanze Leineweber	Work–family conflict, emotional exhaustion and performance based self-esteem: reciprocal relationships	Motive of this study is to explore the prospective relations between the three constructs in a large Swedish data set representative of the Swedish workforce.	Longitudinal data with a 2-year time lag were gathered from 3,387 working men and women who responded to the 2006 and 2008 waves of the Swedish Longitudinal Occupational Survey of Health.	It is concluded that the no differences were found between men and women.
5	2014	Khan, Ejaz Ahmed, Muhammad Aqeel, and	Impact of Job Stress on Job Attitudes and Life Satisfaction	The main objective of this study was to find out the relationship	This is a cross-sectional study design based on purposive sampling technique.	The results revealed that job stress has a significant negative relationship with

		Muhammad Akram Riaz	in College Lecturers	of job stress with job attitudes in college lecturers.		job performance, job satisfaction, and life satisfaction while positively significant related with turnover intentions.
6	2014	Rajeswari V., K. Santa kumara	Human Resource Development in Indian Railways - An Overview	To examine on Human Resource Management --A study of Indian Railways since 1950-51 to 2010-11.		The Indian Railways has emerged today as the main vehical for the socio- economic development of the country. It concluded that the total costs of Human Resource reduce is substantial at Rs.3, 273.46 crore during the above study period. In forthcoming 5 years the Human Resource strength may further decline in Indian Railways and in turn the Human Resource strength might be as low as 12 Lakhs by 2014-15.
7	2014	Khosa, Mr. Madala	Impact of Occupational Stress	This study was conducted to	In carrying out the study, a random sample	The research showed that there is a

		Gilbert, MrIshmael Tiriyo, Ms. Guillermina Ritacco and Prof. Adolf Lowies	and Burnout on Employee Job Performance: A Study of Nurses in Rural Clinics of Bushbuckridge in Mpumalanga Province	assess the impact of stress and burnout on performance of registered nurses in the primary healthcare facilities of Bushbuckridge sub-district, in Mpumalanga province.	technique was used to select 50 registered nurses from 38 primary healthcare facilities.	negative relationship between job stress and burnout on the performance of nurses in rural clinics of Bushbuckridge.
8	2014	Lakshminarayanan, R	An Overview of Strategic Planning to Combat Occupational Stress – Need of the Hour in the Present Indian Context	To suggest some urgent strategic planning needed to combat the alarming raise of disorder in the health of the employee and the organization as a whole, in the present Indian context and scenario.		In today's world no profession is stress free. Both employer and employee must understand that work should not compromise on health and family life; rather offer happiness, peace of mind, certainty, variety and flexibility. As a general rule, actions to reduce job stress should be given top priority.
9	2014	Ozbag, Gonul Kaya and Gokçe Çiçek Ceyhun	The Impact of Job Characteristics on Burnout; The Mediating	The aim of this study is to test the relationships among job characteristics (skill	The proposed hypotheses were tested by hierarchical regression analysis by means of data	The results indicated that WFC partially mediated the relationship between job characteristics

			Role of Work Family Conflict and the Moderating Role of Job Satisfaction	variety, task significance, task identity, autonomy and feedback), job satisfaction, work family conflict (WFC) and burnout (exhaustion, personal accomplishment and cynicism).	from 161 employees.	and burnout. In addition, job satisfaction was found to moderate the relationship between job characteristics and burnout in such a way that the relationship is weaker for employees with high levels of job satisfaction.
10	2014	Sajid, Hasnain	A Comparison of Organizational Commitment and Job Burnout among Teachers in Private and Public Institution with moderating effect of Job Satisfaction.	To conduct a comparison between organizational commitment, and job burnout among faculty/teachers in private institution and public institution with a moderating effect of job satisfaction.	A total of 107 responses were gathered through primary sources for the analysis of the study. Analysis was done using Multiple Regression.	This study concluded that: Emotional exhaustion, personal accomplishment and depersonalization were not established relationship with organizational commitment. Burnout negatively effects the organizational commitment of teachers.
11	2013	Khanna, Sanaya	Hr Challenges	To study the "people side"	Information for this paper is	The Indian Railways has

			and Opportunities in Indian Railways	of HR in Indian railways, challenges faced by the HR in the current era in the Railway industry.	purely secondary data based and is sourced from various articles of different scholars, books, journals and through access of many websites. Through this the study is able to generate a quality analysis and conclusion.	emerged today as the main vehicle for the socio- economic development of the country. The vision is to improve personal productivity at all levels. Therefore the organizational thrust should be to ensure that the resources human as well as technology are allocated wisely, in a planned manner.
12	2013	Lee, Nick, John W. Cadogan and Geoffrey R. Durden	Work-Related Stressors and Psychological Strain in the Sales Force: The Role of Intrinsic and Extrinsic Motivation	To monitor the effect of Intrinsic and Extrinsic Motivation factors on Work-Related Stressors and Psychological Strain in the Sales Force.		Emotional exhaustion is found to increase strain. Intrinsic motivation reduces strain under conditions of relatively high role ambiguity, but leads to more strain under conditions of low role ambiguity.
13	2012	Aftab, Hira, Anam Javeed	The Impact of Job Stress on the Counter-productive Work	This research aims to find out the impact of job stress on the counter-productive	This research is a causal study and on the same time cross sectional one. Job stress and counter-	The results shows that overall sample was facing job stress mainly due to huge deal of attention

			Behavior (CWB) A Case Study from the financial Sector of Pakistan	work behavior (CWB) and to quantify the relationship between Job stress & counter-productive work behavior.	productive work behavior has been measured through diverse factors.	demanded by their work beyond normal jobs range, remember many things, excessive workload than normal work, forced to work more by their supervisors and employers, poor communication, no appreciation received from management, unfair performance evaluation system, inappropriate working conditions and inappropriate salaries and rewards which leads to dissatisfaction and creates stress.
14	2012	Reddy, G. Lokanadha, R. Poornima	Occupational Stress and Professional Burnout of University Teachers in South India	The purpose of the present study is to investigate the occupational stress and the professional burnout of university teachers.	The sample of the study is from 9 state universities selected through simple random sampling technique. A five point rating scales to assess the occupational stress and	The prevention and management of workplace stress requires organizational level interventions, because it is the organization that creates the stress. The results revealed

					professional burnout of university teachers developed by the investigators was used.	that majority (74%) of the university teachers are experiencing moderate and high levels of occupational stress and 86 percent of teachers have professional burnout.
15	2012	Shrivastava, Manjari	Stress, Workaholism and Job Demands: A Study of Executives in Mumbai.	The main objective of the study is an exploration towards identifying the relationship between Workaholism, job demands, work values and perceived stress and anxiety among working professionals in Mumbai, India.		Results reveal the dimensions of workaholism, work values and job demands that emerged as predictors of stress and anxiety. Some of the dimensions of job demands showing the extreme nature of the job came out as the negative predictor of stress, which reflects an entirely different perspective of people in the society.
16	2011	Mansoor, Muhammad, Sabtain Fida, Saima	The Impact of Job Stress on Employee Job Satisfaction	To examine the impact of job stress on employee job satisfaction.	A sample of 134 employees from the telecom sector from Pakistan was used for	This study results revealed that stress is negatively related to employee's job

		Nasir and Zubair Ahmad	A Study on Telecommunication Sector of Pakistan		this analysis.	satisfaction.
17	2011	Chaudhay, Dr. Asiya and Roohi Iqbal	An Empirical Study on Effect of Welfare Measures on Employees' Satisfaction in Indian Railways.	This paper is devoted to study on effect of welfare measures on employee's satisfaction in Indian Railways.	In this study researcher determine the sample size of 500 employees is chosen from various levels by following the technique of simple random sampling. The primary data was collected by using questionnaires.	After analyzing the whole situation the researchers concludes that the Employees' welfare schemes are not sufficient for the employees of the Indian Railways and no improvements are found in any schemes. The data is either constant or has gone in to negative.
18	2011	Rathi, Neerpal and Amrita Banerjee	Emotional Exhaustion and Work Attitudes: Moderating Effect of Personality among Frontline Service Employees	To explore the relationship of emotional exhaustion with job satisfaction and organizational commitment among frontline service employees.	Data for this study were collected from 250 employees working in various restaurants and hotels in India.	The results of the study indicate that emotional exhaustion is negatively associated with job satisfaction and organizational commitment. Moreover, extraversion dimension of personality was observed to have a significant interaction effect

						on the relationship of emotional exhaustion with job satisfaction and organizational commitment.
19	2011	Srivastava, Shalini	Job Burnout And Managerial Effectiveness Relationship - Moderating Effect Of Locus Of Control And Perceived Organizational Support: An Empirical Study On Indian Managers.	The purpose of the study is to explore the relationship between Job Burnout and Managerial Effectiveness as moderated by Perceived Organizational Support and Locus of Control		It was found that Job Burnout was negatively related to Managerial Effectiveness and Perceived Organizational Support and Locus of Control moderated Job Burnout and Managerial Effectiveness relationship. By understanding the relationship between these variables, the organizations should conduct training programs to actively manage their Human capital.

20	2008	Mojoyinola, J. K.	Effects of Job Stress on Health, Personal and Work Behavior of Nurses in Public Hospitals in Ibadan Metropolis	The study investigated the effects of job stress on the physical health, mental health personal and work behaviors of nurses in public hospitals in Ibadan Metropolis, Nigeria.	The study was carried out among 153 nurses working in two public hospitals in Ibadan Metropolis, Nigeria. Expost-facto research design was adopted for the study.	It concluded that job stress has significant effect on physical and mental health of the nurses. It also established that there was a significant difference in personal and work behavior of highly stressed nurses and less stressed nurses.
21	2007	Singh, Prof. Tripti, Avantika Singh and Prabha Singh	Relationship of Stress and Job Satisfaction : A Comparative Study of Male & Female of Dual Career Teacher Couples of India.	The research paper compares the relationship of stressors at 'work', 'family domains', and 'the work family interface' on the job satisfaction of male and female members of dual career teacher couples.		The results indicate that there exists significant difference in the level of stress faced and the job satisfaction of male and female teachers.
22	2006	Tsigilis, Nikolaos, Evridiki Zachopoulou and Vasilios	Job satisfaction and burnout among Greek early	The purpose of the present study was to examine perceived levels of	One hundred and seventy eight childhood educators participated in the study. 108	In conclusion the present study found that Greek early educators experienced emotional

		Grammatikopoulos	educators: A comparison between public and private sector employees.	burnout and job satisfaction of Greek early educators, across public and private sector.	were working in the public sector, 67 in private sector, whereas three did not respond.	exhaustion levels above average. They were most satisfied from the nature of their work and their supervisor and less satisfied from the salary they receive.
23	2006	Karatepe, Osman M and. Mehmet Tekinkus	The effects of work-family conflict, emotional exhaustion, and intrinsic motivation on job outcomes of front-line employees	The purpose of this study is to investigate the effects of work-family conflict, emotional exhaustion, and intrinsic motivation on front-line employees' job performance, job satisfaction, and affective organizational commitment in Turkish retail banks as its setting.	A total number of 363 usable questionnaires were personally retrieved from front-line employees in the research location. The relevant writings were canvassed in order to design the survey instrument.	Results reveal that work-family conflict increased emotional exhaustion and decreased job satisfaction. Intrinsic motivation was found to exert a significant negative impact on emotional exhaustion. Results demonstrate that high levels of intrinsic motivation resulted in high levels of job performance, job satisfaction, and affective commitment to the organization.
24	2005	Brotheridge, Celeste M. and	Emotional Labor and Burnout: Comparing	Current study compared two perspectives	A total of 238 full-time Canadian employees	Significant differences existed in the emotional

		Alicia A. Grandey	Two Perspectives of "People Work"	of emotional labor as predictors of burnout beyond the effects of negative affectivity: job-focused emotional labor (work demands regarding emotion expression) and employee focused emotional labor (regulation of feelings and emotional expression).	participated in this study as part of a larger study on emotions in the workplace.	demands.
25	2005	Poelmans, Steven	Work-Family Conflict as a Mediator of the Work Stress–Mental Health Relationship	To find out about the factors outside the work setting that might predict or moderate the relationship between work stressors and strain		WFC mediates the relationship between some work stressors and mental health. This implies that mental health problems will increase if work stress spills over to the family and consequently causes work-family conflict.

RESEARCH GAP

"A Causal Paradigm of the Antecedents of Organizational Commitment – Case of Loco Pilots of Indian Railways" in this study researcher **only sampled India's first and Asian's second largest public sector transport organization. Therefore, the findings may not be generalizable to other transport sectors.** Future research efforts should obtain sample from several transport sectors.

Studies related to HR in Indian Railway tries to do their best but they also miss out so many points like in the research paper "Human Resource Development in Indian Railways - An Overview" **evaluated the manpower of Indian railways only from 1950-51 to 2010-11**. So the results cannot be more specific, hence in order to get more appropriate and specific result future study should be based on recent data. "Hr Challenges and Opportunities in Indian Railways" research study completely **based on secondary data so this limits the generalizability** of the study. In order to get detailed knowledge about the hr challenges and opportunities in Indian railways future study can be based on primary data.

By reviewing so many research papers fewer researches can be found on Indian Railways, there is not a single research on occupational stress among Indian railway employees, so it will be a good opportunity to fill this gap.

JUSTIFICATION AND RELEVANCE

Stress is necessary! The only people with no stress are dead - no kidding, stress is simply a behavioral adjustment to change. The body is under stress from breathing, walking and eating just as the wire a tightrope walker walks on is under stress. If the wire weren't under stress - slack - the tightrope walker would fall. The same is true of us, without stress, our bodies and mind wouldn't perform. The **key is to find the right amount of stress for each of individually**.

Everyone experiences stress in some way, shape, or form. We all recognize when we're in stressful situations, and we all know when we're stressed. At the same time, stress is more than just a feeling that we have a lot to deal with. Once the effects of stress and the damage it is doing to the body **are recognized then it's time to do something about it.**

There's no real way to live a completely stress-free life. Remember, there are positive stressors as well as negative ones, and the positive ones are usually good experiences that we enjoy or seek out. The same applies for negative stressors: they're bound to happen eventually and avoiding them is a futile effort. The key is in knowing how to deal with them, and how to minimize their effect on you.

Service sector in India consists of a wide variety of services such as electricity, water supply, road, rail and air transport etc which provides a vast opportunities for HRD. Indian Railways is the backbone of service sector and one of the biggest employers in India.

In Indian Railways **human resource helps** not only **in tapping the fixed and scare resources** of organization in an effective and efficient way but also in **attaining the goals of organization** in a rapid manner. In fact, they are the **real assets of Indian Railways**.

This research will focus on occupational stress factors affecting the performance of Indian Railway employees. There are plenty of good reasons to learn to cope with stress, but there are other equally good reasons to remove the stress from your life when you can.

RESEARCH OBJECTIVES

1. To find out various **causes** of occupational stress among NWR employees.
2. To identify the **effects of occupational stress over the performance** of NWR employees.
3. To **examine various strategies** for **overcoming occupational stress**.
4. To **design a model for overcoming occupational stress** among NWR employees.

HYPOTHESIS

H_0:- There is no significant impact of occupational stress on the performance of selected employees of North Western Railway.

H_1:- There is significant impact of occupational stress on the performance of selected employees of North Western Railway.

Sub- Hypothesis:

H_{01}:- There is no significant impact of job factors on the performance of employees.

H_{02}:- There is no significant impact of organizational factors on the performance of employees.

H_{03}:- There is no significant impact of interpersonal relations factors on the performance of employees.

H_{04}:- There is no significant impact of environmental factors on the performance of employees.

PLAN OF WORK AND METHODOLOGY

Research Design and Instruments

Research design is the framework that is created to seek answers to research questions. For this study explanatory research design will going to be used.

Explanatory Research Design

The term explanatory research implies that the research in question is intended to explain, rather than simply to describe, the phenomena studied. Traditionally, the research denoted by the term explanatory research has been quantitative in nature and has typically tested prior hypotheses by measuring relationships between variables; the data are analyzed using statistical techniques. In the narrowest sense, this term is sometimes used synonymously with experimental research, with the implication that only experiments are capable of answering causal questions.

Universe of the Study

Employees of all four divisions of North Western Railway zone which are around 44,000.

Sample Design

Stratified Sampling and Simple Random Sampling. By using Krejcie Morgan table.

Area wise distribution of total number of employees of NWR

Sr.No.	Divisions of NWR zone	Number of Employees
1	Jaipur	12,000
2	Ajmer	9,000
3	Bikaner	13,000
4	Jodhpur	10,000
Total		44,000

Source: NWR official site

Krejcie Morgan Formula

Sample Size Formula for Finite Population

If the target population is finite, the following formula (Krejcie & Morgan, 1970) may be used to determine the sample size.

$$S = \frac{X^2 NP(1-P)}{d^2(N-1) + X^2 P(1-P)}$$

Where:

S = Required Sample size
X = Z value (e.g. 1.96 for 95% confidence level)
N = Population Size (44,000)
P = Population proportion (expressed as decimal) (assumed to be 0.5 (50%)
d = Degree of accuracy (5%), expressed as a proportion (.05); It is margin of error

Table for determining sample size for finite population

To simplify the process of determining the sample size for a finite population, Krejcie & Morgan (1970), came up with a table using sample size formula for finite population.

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

By analyzing the Krejcie & Morgan table determined sample size is 380.

On the other hand opted sample size is 600 as 380 is small number of sample for analyzing effects of stress among employees.

Data Collection Methodology

For this study **Primary data** will be collected through **Questioners** and **Secondary data** will be through **railway annual reports, newspaper, journals, etc**

Data Analysis Tools

Descriptive Analysis: Suitable tests will be applied
Inferential Analysis: Pie charts, graphs, etc.

Variable Selection

Independent Variable - Occupational Stress

Sub- Independent variables:

a) Job Factors
b) Organizational Factors
c) Interpersonal Relations Factors
d) Environmental Factors

Dependent Variable- Job performance

Limitations

Due to large universe (all employees of NWR) this study will only going to focus on Jaipur and Ajmer region employees only.

SCHEME OF CHAPTERIZATION

Chapter	Topic	Page No.
	List of Tables	
	List of Figures	
	List of Abbreviations	
1.	**Introduction**	
2.	**Review of Literature**	
3.	**Research Methodology**	
3.1	Research Gap	
3.2	Relevance of the study	
3.3	Need & Significance of the study	
3.4	Objectives of the study	
3.5	Hypotheses	
3.6	Scope of the study	
3.7	Universe of the study	
3.8	Sample Selection	
3.9	Tools	
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3.11	Processing of Data	
3.12	Statistical Analysis	
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